

Long-Term Durability of Plastic Sheeting Liners

Haxo and Haxo (1988) Stated in a Consensus Report for US EPA Expert Panel,

"The polymers that were discussed and first-grade compounds based on these polymers should maintain their integrity in landfill environments for considerable lengths of time, probably in terms of 100's of years."

Nevertheless, when these polymers or compounds are used in products such as FMLs, drainage nets, geotextiles, and pipe, they are subject to mechanical and combined mechanical and chemical stresses which may cause deterioration of some of the important properties of these polymeric products in shorter times."

US EPA (1988) Stated in Developing Subtitle D Regulations,

"First, even the best liner and leachate collection system will ultimately fail due to natural deterioration, and recent improvements in MSWLF (municipal solid waste landfill) containment technologies suggest that releases may be delayed by many decades at some landfills."

US EPA (1988) Had Previously Concluded,

"Once the unit is closed, the bottom layer of the landfill will deteriorate over time and, consequently, will not prevent leachate transport out of the unit."

30-Year Post-Closure Care Myth

RCRA Indicates That Only 30 yrs of Post-Closure Care May Be Needed for "Dry Tomb" Landfills

Based on Incorrect Assumptions about Landfill Processes

Landfill Processes Depend on Moisture Content of Waste

Fermentation - Decomposition of Fermentable Organics;
Landfill Gas Formation

Leaching - Solubilization of Waste Components

Freeze & Cherry - Roman Empire Landfills Still Producing Leachate

Belevi & Baccini - Sanitary Landfills Will Produce Leachate That Is Hazardous to Public Health for >2,000 yrs

"Dry Tomb" Landfills Threaten Groundwater Quality Forever

Monitoring "Dry Tomb" Landfills

Current Groundwater Monitoring Approach Not Reliable for Lined Landfills

Does Not Consider Characteristics of Leakage and Leachate Migration from Lined Landfills

Significantly Different from Unlined Landfills

Widespread Groundwater Pollution Can Occur from Lined Landfill before Detected by Current Groundwater Monitoring Systems